



SEQUENCE LISTING

Mirkin, Chad A.
 Letsinger, Robert L.
 Mucic, Robert C.
 Storhoff, James J.
 Elghanian, Robert
 Taton, Thomas A.
 Garimella, Viswanadham
 Li, Zhi
 Park, So-Jung
 Lu, Gang

<120> NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO
AND USES THEREFOR

<130> 00-1272-C

<140> 10/008,978

<141> 2001-12-07

<150> 09/927,777

<151> 2001-08-10

<150> 09/820,279

<151> 2001-03-28

<150> 09/760,500

<151> 2001-01-12

<150> 09/603,830

<151> 2000-06-26

<150> 09/344,667

<151> 1999-06-25

<150> 09/240,755

<151> 1999-01-29

<150> PCT/US97/12783

<151> 1997-07-21

<150> 60/031,809

<151> 1996-07-29

<150> 60/176,409

<151> 2000-01-13

<150> 60/192,699

<151> 2000-03-28

<150> 60/200,161

<151> 2000-04-26

<150> 60/213,906

<151> 2000-06-26

<150> 60/224,631

<151> 2000-08-11

<150> 60/254,392
 <151> 2000-12-08

<150> 60/254,418
 <151> 2000-12-08

<150> 60/255,235
 <151> 2000-12-11

<150> 60/255,236
 <151> 2000-12-11

<150> 60/282,640
 <151> 2000-04-01

<160> 76

<170> Microsoft Word 2000

<210> 1
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 1
 aaacgactct agcgcgata

20

<210> 2
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 2
 atggcaacta tacgcgctag

20

<210> 3
 <211> 16
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 3
 ccttgagatt tccctc

16

<210> 4
 <211> 16
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 4
 gagggaaatc tcaagg 16

<210> 5
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 5
 aacttgcgct aatggcga 18

<210> 6
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 6
 aagttgcgct ttacggctaa tggcga 26

<210> 7
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 7
 tctccttccc ttttc 15

<210> 8
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 8

gaaaaggga ggaga

15

<210> 9

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 9

cttttcctt cctct

15

<210> 10

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 10

aaacgactct agcgcgtata gttgccat

28

<210> 11

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 11

atggcaacta tacgcgctag agtcgttt

28

<210> 12

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 12

cctatcgacc atgct

15

<210> 13
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 13
 agcatggtcg ataggaaacg actctagcgc

30

<210> 14
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 14
 gcgctagagt cgttt

15

<210> 15
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 15
 agcatggtcg ataggatggc aactatacgc

30

<210> 16
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 16
 gtcgatagga aacgactcta gcgc

24

<210> 17
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random

synthetic sequence

<400> 17
agcatggttg ataggaaacg actctagcgc 30

<210> 18
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 18
agcatgtttg ataggaaacg actctagcgc 30

<210> 19
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 19
tctcaactcg ta 12

<210> 20
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 20
cgcatcagg at 12

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 21
tacgagttga gagagtgcc acat 24

<210> 22

```

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 22
tacgagttga gaatcctgaa tgcg                                24

<210> 23
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 23
tacgagttga gaatcctgaa tgct                                24

<210> 24
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 24
tacgagttga gactcctgaa tgcg                                24

<210> 25
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 25
tacgagttga gaatcctgaa tgc                                23

<210> 26
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

```

<400> 26
tacgagttga gacatcctga atgcg 25

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 27
tacgagttga gaatcctgaa tgcg 24

<210> 28
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 28
taggacttac gc 12

<210> 29
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 29
tacgagttga gaccgttaag acgaggcaat catgcaatcc tgaatgcg 48

<210> 30
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 30
tgcagattg cctcgtctta acgg 24

<210> 31
<211> 72


```

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 31
tacgagttga gaccgttaag acgaggcaat catgcatata ttggacgctt tacggacaac 60
atcctgaatg cg                                                    72

<210> 32
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 32
gttgtccgta aagcgtccaa tatatgcatg attgcctcgt cttaacgg           48

<210> 33
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 33
tctcaactcg ta                                                    12

<210> 34
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 34
tacgagttga gaatcctgaa tgcg                                     24

<210> 35
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

```

<400> 35
cgcatcagg at 12

<210> 36
<211> 141
<212> DNA
<213> anthrax

<400> 36
ggcggatgag tcagtagtta aggaggctca tagagaagta attaattcgt caacagaggg 60
attattgtta aatattgata aggatataag aaaaatatta tccagggtta tattgtagaa 120
attgaagata ctgaagggt t 141

<210> 37
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 37
taacaataat ccctc 15

<210> 38
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 38
atccttatca atatt 15

<210> 39
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 39
tgagcctcct taactactga ctcatccgcc 30

<210> 40
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 40
 tgttgacgaa ttaattactt ctcta 25

<210> 41
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 41
 tataaccctg gataatattt ttcttat 27

<210> 42
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 42
 aagcccttca gtatcttcaa tttctacaa 29

<210> 43
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 43
 tctcaactcg taaaaaaaaa aa 22

<210> 44
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 44
 tacgagttga gaatcctgaa tgcg 24

<210> 45
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 45
 aaaaaaaaaa cgcattcagg at 22

 <210> 46
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 46
 tctcaactcg taaaaaaaaa aa 22

 <210> 47
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 47
 aaaaaaaaaa cgcattcagg at 22

 <210> 48
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 48
 tacgagttga gaatcctgaa tgcg 24

 <210> 49
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 49
 ctacttagat ccgagtgtccc acat 24

<210> 50
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 50
 cgcattcagg at 12

<210> 51
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 51
 aaaaaaaaaa aaaaaaaaaa cgcattcagg at 32

<210> 52
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 52
 cgcattcagg atwwwwww wwwwww www 32

<210> 53
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 53
 atcctgaatg cg 12

<210> 54
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 54
 atcctgaatg cg 12

 <210> 55
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 55
 aaaaaaaaaa aaaaaaaaaa 20

 <210> 56
 <211> 27
 <212> DNA
 <213> Anthrax

 <400> 56
 ggattattgt taattattga taaggat 27

 <210> 57
 <211> 12
 <212> DNA
 <213> Anthrax

 <220>
 <221> misc_feature
 <222> (8)..(8)
 <223> n stands for a, g, c, or t

 <400> 57
 taacaatnat cc 12

 <210> 58
 <211> 15
 <212> DNA
 <213> Anthrax

 <400> 58
 atccttatca atatt 15

<210> 59
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 59
 tctcaactcg ta 12

<210> 60
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 60
 tacgagttga gaatcctgaa tgcg 24

<210> 61
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 61
 gcgtaagtcc taacgtacta acggagcaga attgccagag ttgagcat 48

<210> 62
 <211> 72
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 62
 gcgtaagtcc tacaacaggc atttcgcagg ttatatacgt actaacggag cagaattgcc 60
 agagttgagc at 72

<210> 63
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 63
tgcatgattg cctcgtctta acgg 24

<210> 64
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 64
gttggtccgta aagcgtccaa tatatgcatg attgcctcgt cttaacgg 48

<210> 65
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 65
tatcgttcca tcagct 16

<210> 66
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 66
ttgatcttcc gttct 15

<210> 67
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 67
agaacggaaa gatcaacgag ctgatggaac gata 34

<210> 68
<211> 30
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 68

aaaaaaaaaa aaaaaaaaaa gcagacctca

30

<210> 69

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 69

aaaaaaaaaa aaaaaaaaaa cctatgtgtc g

31

<210> 70

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 70

aaaaaaaaaa aaaaaaaaaa

20

<210> 71

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 71

cgacacatag gtgaggtctg c

21

<210> 72

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 72

aaaaaaaaaa aaaaaaaaaa atccttatca atatt

35

<210> 73

<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 73
tctcaactcg taaaaaaaaa aa 22

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 74
aaaaaaaaaa cgcattcagg at 22

<210> 75
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 75
aaaaaaaaaa cgcattcagg at 22

<210> 76
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 76
tacgagttga gaatcctgat tgcg 24